UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,041	03/16/2004	Jin Hong Kim	46500-000143/US	1235

30593 7590 01/14/2008

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER	
RAEVIS, ROBERT R	

ART UNIT	PAPER NUMBER
2856	

MAIL DATE	DELIVERY MODE
01/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/801,041	KIM ET AL.	
	Examiner	Art Unit	
	Robert R. Raevis	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,10-14 and 18-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,10-14,18-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Exhibit "A"*.

DETAILED ACTION

Claims 8,10-14,18-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 11, where is there support for the "inversely **proportional**" (highlighting added) relationship? (Note: Y=1/X is an indication of an inversely **proportional** relationship or Y to X. Applicant does not have support for that relationship.) There is no support for any proportionality as claimed. Where is there any proportional teaching in the argued Para 17? Para 17 provides for only two points that may or may not be proportionally related.

As to claim 11, where is there support for the "inversely" relationship? Presently, Para 17 simply says that when the predetermined number of turns is high, that the pressure is then low; and that when the predetermined number of turns is low, that the pressure is high. That does not provide for an inverse relationship. All that states is that at some predetermined number of rotations, that the pressure changes from low to high. There is not support for any inverse relationship. This is only support for two different groups (one above, the other below the predetermined number), but no relationship between the points within either of the two groups.

Para 16.1 is new matter to the extent of "inversely related".

(As to **REMARKS**, please consider the following:

As to p. 5, regarding Claim 11; please look at Exhibit "A". While originally filed Para 17 provides for two points having different values (top graph), that does not mean that there is only an inversely proportional relationship (second graph from top). After all, the top graph may suggest a proportional relation (third graph from top), or something else (bottom graph). The top graph simply provides for two points, and therefore does not provide for the inversely relation now claimed.)

As to claim 8, where is there support for "determining the endurance of the optical disc *based on* a jitter value of 10%" (italics added)? Please note that the single horizontal dashed line in Figure 6 does not seem related to a threshold of failure ("endurance...based on a jitter value of 10%", last line of claim 8), as suggested on p. 6 of the **REMARKS**. That is especially so as the two solid circle points above the dashed (fail?) line are not tagged "Fail" as is done for the two triangle points also above the dashed (fail?) line, and one point below the dashed (fail?) line is tagged "Fail". That single dashed line is just there, *with both "Fail" and non-fail points both above and below the dashed line*, which line is allegedly associated with a threshold of failure (or endurance, if you will). In that instance, the dashed line does not provide for an indication of failure in Figure 6. In fact, there are points both above and below the 10% line that are indicated as "Fail" where the points are obtained form 5 rotations or less, once again indicative that a jitter value of 10% is less than helpful in determining endurance. If endurance is (somehow) a function of the 10% jitter line, why are there indications of failure on both sides of that line, and also indications of non-failure on

both sides of that same line? How is endurance a function of jitter? The originally filed graph does not support such assertion.

Claims 18-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 18, "symbol error rate" is undefined. How is this used to determine endurance?

As to claim 19, "bit error rate" is undefined. How is this used to determine endurance?

As to claim 20, "servo error signal" is undefined. How is this used to determine endurance?

As to claim 21, "tracking error signal" is undefined. How is this used to determine endurance?

Claims 8,10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashida et al.

As to claim 8, Hayashida et al teach (Para 91) a method to test endurance of an optical disc, including: placing the disc on a turntable; rotating the turntable and disc; applying pressure to the disc using a scratching unit (abrasive wheels) while the disc

rotates a number of turns, so as to scratch the surface of the disc; and ascertaining the abrasion resistance of the sample, said resistance indicative of endurance. Force applied to the disc from above employs a pressure that is applied in the vertical direction. Jitter less than 10% is in the "satisfactory range" (Para 154).

Hayashida does not refer to "up to five" rotation turns.

As to claim 8, it would have been obvious to employ up to five rotation turns as TABLE 3 illustrates use of 5 abrasion cycles, while relating the cycles to the "rotating the turntable" (Para 91), suggestive of turning the specimen of interest 5 rotations during testing.

Hayashida refers (Para 91) to a range of cycles under a range of loads, but does not base one (loads) on the other (cycles).

As to claim 10, it would have been obvious to apply a reduced load for a greater number of cycles as it would be desirable to assure that the wheels do not fully pass through the disc of interested, to thus permit for a measurement of a parameter (i.e. the change of thickness" (Para 94)) that's indicative of abrasion resistance.

As to claim 11, one of ordinary skill would be inclined to try a greater force (i.e. double) and reduced number of turns (by half) to produce a test that may be completed over a shorter time, necessarily employing a proportional relation.

As to claim 12,13, it would have been obvious to employ a non-rotating test piece (in place of a wheel) in Hayashida as Hayashida teaches (Para 90,92) that steel wool may effectively permit for abrasion testing of a rotating body. Such a test piece must

provide for a sufficient force/area ration to provide for a measure of abrasion. The pressure provided in Applicant's claim 12 is within the range of sufficient pressures, especially as Nakagawa's test piece is non-rotating, just like Applicant's.

As to claim 14, Hayashida suggests (Para 94) depth measurement as a means to evaluate abrasion resistance. In addition, one of ordinary skill would provide for reference values indicative of whether resistance for a particular disc is acceptable. The threshold value provided in Applicant's claim 14 seems to be within one of ordinary skill.

(As to **REMARKS**, please consider the following:

As to p. 10, last paragraph; Hayashida's Table 3 provides results for "5" abrasion cycles. The numeral "5" is there.

As to p. 11, top three lines, Hayashida's Table 3 related the "5" cycles to 5 "Abrasion cycles". Abrasion occurs during the abrasion cycle.)

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 5:30am to 3pm.

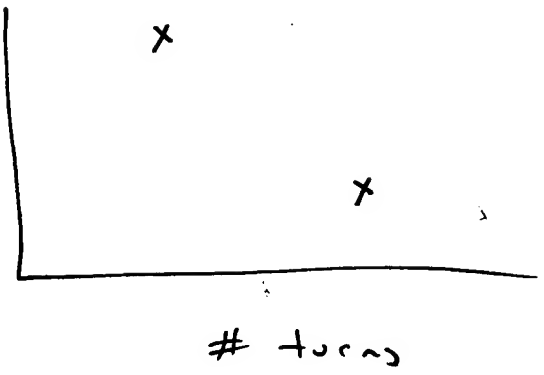
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raevis
RAEVIS

Exhibit "A"

Applicant has support based on para 17 for two points ⟹



claim 11 filed 11/17/05 calls for inverse proportional relation ⟹